

**Notice of Allowability**

Application No.

09/801,589

Examiner

Kuo-Liang J Tang

Applicant(s)

EVANS ET AL.

Art Unit

2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/9/2004.
2. ☒ The allowed claim(s) is/are 1-37.
3. ☒ The drawings filed on 08 March 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|   | 9. <input type="checkbox"/> Other _____.   |

### DETAILED ACTION

1. This Office Action is in response to the amendment filed on 5/19/2004.

Claims 1-37 are allowed.

### REASON FOR ALLOWANCE

2. The cited prior art taken alone or in combination fail to teach, in combination with the other claimed limitations, how to connect the JVM to the probe program, and

(a) latmch a JVM;

(b) use a JPDA bootstrap object to obtain a JPDA Virtual Machine Manager;

(c) access a list of connectors from said VMUaI Machine Manager;

(d) connect the probe program to the JVM by:

(1) iterating through said list of connectors and

(2) storing a command line launch object as a connector object;

(e) executing an application program for debug and test under the JVM by:

(1) setting a mxin argument for the connector object to the name of said application program,

(2) setting a mspend argument for the connector object to true,

(3) invoking a latmch method which returns a Virtual Machine WMI object to the probe program

(4) creating one or more exception requests for suspending the application

Program When all exception event occur,

(5) creating a notification request for loading of classes and thread deaths,

(6) reading a list of loaded classes, and

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(7) spawning a thread which enters an event retrieval loop.

as recited in **independent claims 1, 14 and 27**;

The closest cited prior arts, Edwards et al. (US. Patent No. 5,901,315) and SUN Inc, "Java Platform Debugger Architecture – Documentation JPDA 1.0", (hereinafter SUNJPDA) discloses "launching a Java virtual machine under the system debug API; executing the application under the Java virtual machine; simultaneous control of the target application via the system debug API and the Java debug API is enabled. Thus, the method effects the debug of the target application by simultaneously debugging the Java code and the native method dynamic load libraries", also SUNJPDA discloses "a debug tool which contain three parts (Java Virtual Machine Debugger Interface (JVMDI), Java Debug Wire Protocol (JDWP) and Java Debugger Interface (JDI)) to be used in Java environment." as recited in **independent claims 1, 14, 27**;

However, Edwards et al. (US. Patent No. 5,901,315) and other cited prior arts, taken alone or in combination fail to teach, how to connect the JVM to the probe program, and

- (a) launch a JVM;
- (b) use a JPDA bootstrap object to obtain a JPDA Virtual Machine Manager;
- (c) access a list of connectors from said Virtual Machine Manager;
- (d) connect the probe program to the JVM by:
  - (1) iterating through said list of connectors and
  - (2) storing a command line launch object as a connector object;

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(e) executing an application program for debug and test under the JVM by:

- (1) setting a mxin argument for the connector object to the name of said application program,
- (2) setting a mspend argument for the connectoy object to true,
- (3) invoking a latmch method which returns a Virtual Machine WMI object to the probe program,
- (4) creating one or more exception requests for suspending the application program. When all exception events occur,
- (5) creating a notification request for loading of classes and thread deaths,
- (6) reading a list of loaded classes, and
- (7) spawning a thread which enters an event retrieval loop.

as recited in **independent claims 1, 14 and 27**;

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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### Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang J Tang whose telephone number is 703-305-4866. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 703-305-4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Kuo-Liang J. Tang*

Software Engineer Patent Examiner

*W. Y. Zhen*

WEI ZHEN

*Primary Examiner*